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ORIGINAL

BEFORE THE ARIZONA POWER PLANT AND
TRANSMISSION LINE SITING COMMITTEE

7000 OCT -9 P 3:41

Docket No. L-00000GG-08-0407-00139
DOCKET CONTROL

Case No. 139

IN THE MATTER OF THE APPLICATION)
 OF ARIZONA SOLAR ONE, LLC., IN)
 CONFORMANCE WITH THE)
 REQUIREMENTS OF ARIZONA REVISED)
 STATUTES §§ 40-360, *et seq.*, FOR A)
 CERTIFICATE OF ENVIRONMENTAL)
 COMPATIBILITY AUTHORIZING THE)
 CONSTRUCTION OF THE SOLANA)
 GENERATING STATION, LOCATED IN)
 SECTION 9, TOWNSHIP 6 SOUTH, RANGE)
 7 WEST, MARICOPA COUNTY, ARIZONA.)

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 OF ARIZONA SOLAR ONE, LLC., IN)
 CONFORMANCE WITH THE)
 REQUIREMENTS OF ARIZONA REVISED)
 STATUTES §§ 40-360, *et seq.*, FOR A)
 CERTIFICATE OF ENVIRONMENTAL)
 COMPATIBILITY AUTHORIZING THE)
 CONSTRUCTION OF THE SOLANA GEN-)
 TIE, WHICH ORIGINATES AT THE)
 SOLANA GENERATING STATION,)
 LOCATED IN SECTION 9, TOWNSHIP 6)
 SOUTH, RANGE 7 WEST, MARICOPA)
 COUNTY, AND TERMINATES AT THE)
 PANDA 230 kV SUBSTATION, LOCATED)
 IN SECTION 20, TOWNSHIP 5 SOUTH,)
 RANGE 4 WEST, GILA BEND, ARIZONA.)

Docket No. L-00000GG-08-0408-00140

Case No. 140

Arizona Commission

DOCKETED

NOTICE OF FILING REBUTTAL TESTIMONY
ON BEHALF OF ARIZONA SOLAR ONE, LLC

Arizona Solar One, LLC ("Applicant") submits the attached rebuttal testimony. To
 sponsor this testimony and answer questions from the Committee or intervenors, the Applicant
 will present Kate Maracas, Larry Killman, Kenda Pollio, and Jessica Wilton as a panel.

RESPECTFULLY submitted this 9th day of October, 2008.

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ORIGINAL and twenty-seven (27) copies of the foregoing filed this 9th day of October, 2008, with:

The Arizona Corporation Commission
Utilities Division – Docket Control
1200 W. Washington Street
Phoenix, Arizona 85007

COPY of the foregoing served electronically this 9th day of October, 2008, to:

John Foreman, Chairman
Arizona Power Plant and Transmission Line Siting Committee
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PAD/CPA
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Betty J. Griffin

1 **Rebuttal Testimony**

2 **Arizona Solar One, LLC.**

3 **October 14, 2008**

- 4
- 5 **1. Describe the estimated tax benefits for the local school districts that will result from**
6 **construction and operation of the Project.**

7 The Applicant anticipates the tax revenues flowing to the local school districts will be
8 approximately \$90M to \$95M over thirty years.

- 9
- 10 **2. What is the status of negotiations with the Paloma Irrigation and Drainage District**
11 **("PIDD") concerning water rates?**

12 Negotiations with PIDD are ongoing. PIDD has signed the affidavit of authority to
13 proceed as joint property owners with the Applicant in the filing of a Maricopa County
14 Comprehensive Plan Amendment ("CPA"), which will acknowledge the Applicant's plan
15 to develop, construct, and operate the Project.

- 16
- 17
- 18 **3. Describe the existing Powerline Road alignment and right-of-way ("ROW").**

19 Maricopa County Assessor's records show that the road alignment is held by PIDD and
20 the width of the alignment varies from 50 to 100 feet. APS holds an eight-foot-wide ROW
21 along the 69kV transmission line located south of Powerline Road.

1 **4. Describe the existing ROW along the Preferred Route between the Gila Bend**
2 **Substation and Watermelon Road.**

3 APS holds and maintains ROW along the north-south alignment between Gila Bend
4 Substation and Watermelon Road. APS' 230kV transmission line is generally located in
5 this north-south corridor, in a 100-foot-wide ROW.

6
7
8 **5. Describe the existing right(s)-of-way for that portion of the Preferred Route along**
9 **Watermelon Road.**

10 The Watermelon Road ROW is approximately 70 feet wide. APS holds a 100-foot-wide
11 ROW for its 230 kV line located on the south side of Watermelon Road. APS holds a
12 ROW for its 69 kV and 12 kV lines that varies in width from 27 to 35 feet. From the west,
13 this ROW is located on the south side of Watermelon Road to a point approximately two
14 miles west of the APS Panda Substation, at which point the lines cross to the north side of
15 Watermelon Road.

16
17 **6. When will the Applicant begin to obtain ROW for this Project?**

18 The Applicant will begin negotiations with landowners to acquire ROW immediately after
19 the CECs are granted.

20
21
22 **7. Please explain the reasons for the Applicant's requested corridor widths along the**
23 **Preferred Route.**

24 In response to the Committee's request, and based on the Committee's initial indication
25 that it favors the Preferred Route to the alternative routes, the Applicant has further
26 evaluated the necessary corridor widths along the Preferred Route.

1
2 The Applicant can accept a 500-foot-wide corridor centered on Powerline Road from the
3 northeast corner of the Solana Generating Station property to APS' Gila Bend Substation.
4 Existing utility features along Powerline Road include the following:

- 5 • APS' existing 69kV line. This line is located on the south side of the road for the
6 full length of the corridor.
- 7 • APS' existing 12kV line. Approximately six miles of this 12kV line is located on
8 the south side of the road as an underbuild on the 69kV line. Approximately three
9 miles of this 12kV line is located on the north side of the road.
- 10 • Paloma Irrigation and Drainage District's canal and private irrigation ditches.
11 Approximately nine miles of the western portion of the corridor contain canals and
12 irrigation ditches adjacent to the road to service the agricultural fields along this
13 portion of the alignment.
14
15

16 The Applicant can accept a 500-foot-wide corridor generally centered on APS' existing
17 230kV line from APS' Gila Bend Substation to Watermelon Road, unless the Committee
18 adopts the Staff's proposed pole separation condition, in which case the Applicant needs a
19 1,000-foot-wide corridor.
20

21
22 For the majority of the Preferred Route along Watermelon Road, the Applicant can accept
23 a narrower corridor of 1,250 feet, located south of Watermelon Road. The south side of
24 Watermelon Road contains Town of Gila Bend water treatment ponds, APS' existing
25 230kV line, and Gila Bend Power Partners' certificated 500-foot-wide 500kV corridor.
26

1 The requested corridor width provides sufficient room for the proposed transmission line
2 to be located south of the water treatment ponds and the previously-certificated corridor.
3 On the north side of Watermelon Road, the Applicant needs a 500-foot-wide corridor that
4 extends 1,320 feet north of Watermelon Road on the east side of the APS Panda
5 Substation.
6

7
8 Granting the requested revised widths would provide the Applicant with sufficient room to
9 work around existing and proposed infrastructure and to work with landowners to address
10 ROW and pole placements.
11

12
13 **8. What impacts will occur if existing lines are consolidated with the Gen-Tie?**

14 In order to consolidate existing lines with the Gen-Tie, the Gen-Tie structures would have
15 to be located closer together. This would result in shorter span lengths, more structures,
16 and higher costs. Additionally, the existing 69kV is a radial line and does not have
17 redundancy; therefore, consolidation of structures would result in construction-related
18 outages.
19

20
21 **9. What is the Applicant's position concerning Staff's proposed pole separation condition?**

22 Because poles will be located farther away from existing roads and other linear features,
23 the Staff's proposal will require the Applicant to acquire significantly more land resulting
24 in greater costs to the Applicant and greater impacts to landowners.
25
26

1 As an alternative to Staff's proposal, the Applicant proposes to construct its towers with a
2 separation that is at least as wide as the height of the existing towers.
3

4 **10. Have you spoken with the owners of the two dairies located along Powerline Road?**

5 Yes, the Applicant has had ongoing discussions with the dairy owners on numerous
6 occasions.
7

8
9 **11. What is their opinion of the Project?**

10 One of the dairy owners favors Alternative One. In the event the Preferred Route is
11 chosen, both dairies have requested that impacts be minimized. One possibility would be
12 to have one or more road crossing(s) in the area of the dairies to allow the Gen-Tie to be
13 on the opposite side of the road from each dairy.
14

15
16 **12. Please describe the Arizona Game and Fish Department's concern about potential
17 impacts to Bull Durham Wash associated with the reduced water use onsite.**

18 The current use of the property results in tailwater runoff from the site into Bull Durham
19 Wash. Tailwater is irrigation water that is not consumed by the crop or does not
20 evaporate. The Arizona Game and Fish Department asked the Applicant to consider the
21 potential impacts to Bull Durham Wash resulting from the reduction in excess irrigation
22 flows to the wash.
23
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1 **13. What impact will reduced onsite water use have on Bull Durham Wash?**

2 Reduced onsite water use will have limited affect because tailwater runoff from the site is
3 just one of several sources that supply water to the head of the Bull Durham Wash at the
4 northern boundary of the Solana Generating Station property. Other sources of water will
5 be unaffected. These other sources include:
6

- 7 • Paloma Irrigation and Drainage District irrigation water supply deliveries through
8 the local canal system to retention ponds and pumps within the Bull Durham Wash.
- 9 • Paloma Irrigation and Drainage District operational spills. The northern boundary
10 of the Solana Generating Station property is located at the end of the local canal
11 system, or “at the end of the ditch.” Operational spills of irrigation supply water
12 are common at the end of a canal system.
- 13 • Tailwater run-off from agricultural land located to the east of the property and
14 agricultural land located to the north of the property.
- 15 • Stormwater drainage.
16

17
18 As a result, while the conversion of the site from agriculture to the Solana Generating
19 Station would result in a reduction of tailwater run-off from the Solana Generating Station
20 property, this water source represents a small amount of the cumulative water supply to the
21 Bull Durham Wash and significant impacts are not anticipated.
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1 **14. What stormwater detention facilities will Maricopa County require the Applicant to**
2 **construct and operate?**

3 As part of the Special Use Permit process, Maricopa County will require the Applicant to
4 construct and operate stormwater detention ponds on the property as well as drainage
5 conveyance channels for offsite stormwater flows. The onsite detention ponds will be
6 designed to capture temporarily the estimated 100-year, 2-hour storm run-off from the
7 Solana Generating Station property. It is anticipated that flow will be detained near the
8 northern limits of the property and discharge to the historic outfall location (Bull Durham
9 Wash) at a flow volume equal to existing condition flows. Drainage will be managed in
10 accordance with Drainage Regulations for Maricopa County.
11

12
13 **15. Through what process will these requirements be imposed?**

14 Detailed drainage facility designs will be described in the Maricopa County Special Use
15 Permit application process; onsite drainage will be managed in accordance with Drainage
16 Regulations for Maricopa County.
17

18
19 **16. What impacts to Bull Durham Wash will result from the construction and operation**
20 **of stormwater detention facilities?**

21 The Applicant plans to manage onsite stormwater by utilizing temporary detention ponds
22 and performing controlled releases of stormwater to manage the flow rate into the Bull
23 Durham Wash. The management of stormwater flow rates would help protect the Bull
24 Durham Wash by preventing an aggressive flow rate following periods of heavy rain.
25
26

1 In addition, historical stormwater discharge locations will be restored. Offsite stormwater
2 run-off is generated from rainfall on topography located on Bureau of Land Management
3 land to the west of the Solana Generating Station property. Currently, flows from the
4 watershed west of the property are directed north by a man-made berm on the west side of
5 the property and discharge approximately one mile north of the property. All flows from
6 offsite watersheds surrounding the Solana Generating Station property will be conveyed to
7 their historic locations per Maricopa County design standards.
8

9
10 Similar to onsite drainage, the Applicant plans to manage offsite stormwater by utilizing
11 onsite temporary detention ponds and performing controlled releases of stormwater to
12 protect the Bull Durham Wash by preventing an aggressive flow rate following periods of
13 heavy rain.
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16 By managing both onsite and offsite stormwater, the Applicant will effectively restore
17 historical flows to the Bull Durham Wash and provide flood mitigation by preventing
18 aggressive flow rates following periods of heavy rain.
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